

# RM-COMPACT: Wireless Broadband IP Radio

## Carrier Grade Medium Capacity Wireless Broadband IP Radio

### OVERVIEW

This platform deploys reliable and secure high-speed wireless IP connections between multiple remote locations. Available in multiple frequency bands and configurations, it covers a distance of more than 50 kms.

Wireless Broadband IP Radio Modem incorporates the latest technologies such as OFDM with VNL's proprietary protocols. The Carrier Grade Solution ensures 24/7 connectivity with zero network downtime.

RM-COMPACT device can be configured to work in multiple deployment modes i.e. Point-to-Point, Multiple-Point-to-Point & Point-to-Multipoint Subscriber Unit. When deployed as Point-to-Multipoint Subscriber Unit, RM-COMPACT can inter-work with RM series Base Station.

IP Radios can be used in various applications like

- Last Mile Access to provide internet connectivity for broadband services. It can also be used in enterprises like mines, offshore fields, hospitals, hotels, universities etc.
- Backhaul connectivity in GSM/3G deployments particularly in rural and remote areas.
- E1/TDM Connectivity to transport native TDM enabling seamless migration from TDM to all IP networks.
- Public safety agencies like for emergency response, where time to provide services with minimum infrastructure dependencies is the key.

### BENEFITS

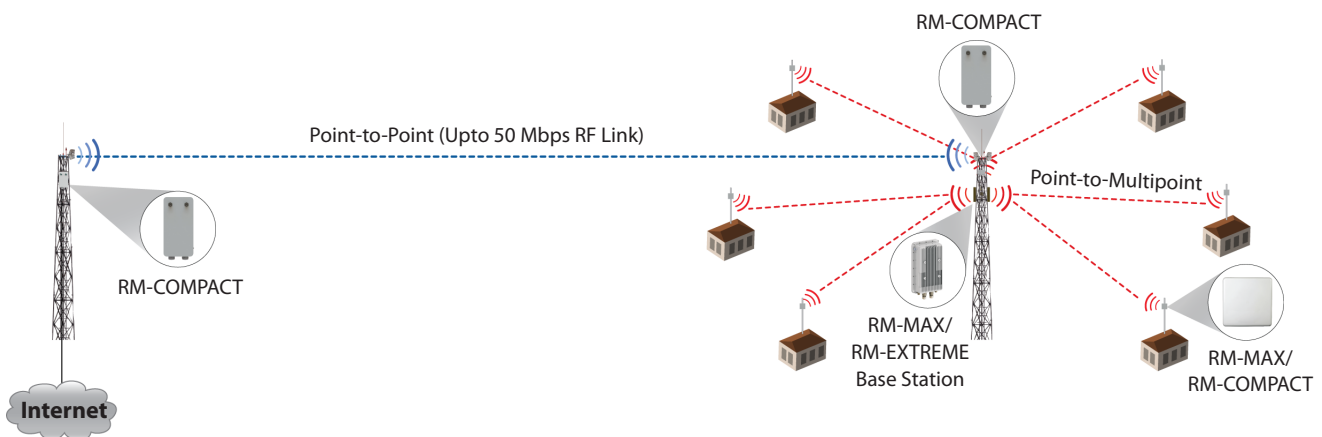
- **Optimized Transmission Cost:** Controls transmission cost by avoiding the need to use fiber and leased lines. Significantly reduces CAPEX and OPEX.
- **Rapid Deployment:** This solution is provided as a Plug and Play solution for rapid deployment. Dismantling and redeployment of the unit is speedy as well.
- **Maximum Service Availability:** RM-Compact offers 1+1 redundancy thus offering maximum service availability.
- **Single Integrated Voice and Data Solution:** Can connect routers via ethernet to provide a Single Voice & Data Link for customers. The revenue generating potential for this application is immense.
- **All Weather Reliability:** System is outdoor capable and rugged enough to withstand extreme weather conditions.



*Carrier Grade Wireless Broadband IP Radio with Integrated/External Antenna*

### HIGHLIGHTS

- *Aggregate User Throughput of Up to 50 Mbps*
- *License Exempt Frequency (2.4 and 5.8 GHz)*
- *Low Power Consumption – Reduced Opex*
- *Compact Form Factor – Easy to Transport and Install*
- *Centralized Management using OMC*



*Point-to-Point and Point-to-Multipoint Network Diagram*

**Related Products:** RM-MAX, RM-EXTREME, SSU, E1-IDU, IDU-E EDS

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## SPECIFICATIONS

SYSTEM	
Type	Outdoor
Link Topology	Point-to-Point, Multiple-Point-to-Point (Only in Sync Enabled Hardware), Point-to-Multipoint Subscriber Unit
Frequency Bands	2.4 - 2.5 GHz / 5.125 - 5.875 GHz
Channel Bandwidth	5/10/20/40 MHz
RF Output (dBm)	Up to 25 dbm (Configurable)
Rx Sensitivity (dBm) 2.4/5.8 GHz	BPSK: -88 QPSK: -86 16QAM: -81 64QAM: -74
Data Rate	Aggregate User throughput of Up to 50 Mbps
Latency	4 msec (Typical)
Duplex Technique	TDD
Dimension (H x W x D) in mm	292 x 139 x 66 (Radio with Ext. Antenna) 370 x 370 x 88 (Radio with Integrated Antenna)
Weight (Kg)	With Integrated Antenna: 3.0 Without Antenna: 1.3

FEATURES	
Modulation	OFDM - BPSK/QPSK/16QAM/64QAM
FEC	1/2, 2/3, 3/4, 5/6
Encryption	AES 128
Adaptive Coding & Modulation	Supported
Automatic Channel Switching	Supported
Site Synchronization	Supported with Sync Option Model
Bridging	Self-Learning Up to 2047 MAC Addresses IEEE 802.1Q
Maximum Frame Size	1536 bytes
VLAN	802.1Q, QinQ Tagging
QoS	IP ToS Based, Two Priorities, SP Scheduling
Management VLAN	Supported
IP/MAC Filtering	Supported
DFS	Supported
Installation and Maintenance Tools	Built in RF Analyzer, Ethernet Test Tool, Ping Test, Buzzer for Alignment

POWER	
Power Supply	48 V through PoE
Max Power Consumption	9 W

INTERFACES		
ETHERNET		
Type	10/100 Base-T Interface with Auto-Negotiation (IEEE 802.3)	
Number of Ports	With Sync: 1 PoE and 1 Sync Without Sync: 1 PoE and 1FE	
Connector	RJ-45	
ANTENNA		
Antenna Port	N-Type (Only for Unit with External Antenna Option)	
Polarization	Dual	
Frequency Band (GHz)	2.4 - 2.5	5.125 - 5.875
Integrated Antenna Gain	19 dBi	23 dBi
Beam Width	20° (Typical)	8° (Typical)

MANAGEMENT	
Management Interface	SSH, Web Server and SNMP
Firmware Upgrade	Local & Remote
Network Management	Centralized Management using OMC

ENVIRONMENT	
Water & Dust Protection	IP66
Operating Temperature	-20° to 70° C (-4° to 158° F)
Humidity	Up to 95% (Non-Condensing)

REGULATION	
RADIO (FCC : 47CFR)	Part 15, Subpart C
C&B (IC)	RSS-210
SAFETY (TUV)	60950, According to UL 60950
SAFETY (CAN-CSA)	C22.2 No. 60950
EMI/EMC	CISPR-22
ENVIRONMENTAL	Category D of QM333

No.	Model No.	Freq	Antenna	Sync Port
1	RMC-2400	2.4	External	
2	RMC-2400-SYNC	2.4	External	Yes
3	RMC-2419	2.4	Integrated	
4	RMC-2419-SYNC	2.4	Integrated	Yes
5	RMC-5800	5.8	External	
6	RMC-5800-SYNC	5.8	External	Yes
7	RMC-5823	5.8	Integrated	
8	RMC-5823-SYNC	5.8	Integrated	Yes

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